

#11  
NU**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

U.S. Serial No.: 09/717,746  
Filing Date: 11/21/2000  
Applicants: Herbert M. Dean et al.  
Title: CARDIOPROTECTIVE DOSAGE UNIT  
Art Unit: 1614  
Examiner: Donna A. Jagoe

Paper No. \_\_\_\_\_

Commissioner for Patents  
Washington, D.C. 20231

**DECLARATION OF DR. JERRY H. GURWITZ**

I, Dr. Jerry H. Gurwitz, hereby declare the following:

1. I am Professor of Medicine, University of Massachusetts Medical School, Executive Director, Meyers Primary Care Institute, the Dr. John Meyers Chair in Primary Care Medicine at the University of Massachusetts Medical School, a Lecturer on Ambulatory Care and Prevention, Harvard Medical School, Chief of the Section for Health Services Research, Division of General Medicine and Primary Care, UMASS-Memorial Healthcare, Staff Physician at Saint Vincent Hospital, and Primary Care Physician, Fallon Clinic, Inc.

2. I have been practicing medicine since 1983 and have specialized in the treatment of the elderly with major research interests in adverse drug events, drug prescribing and utilization patterns, and clinical decision-making in the elderly patient population.

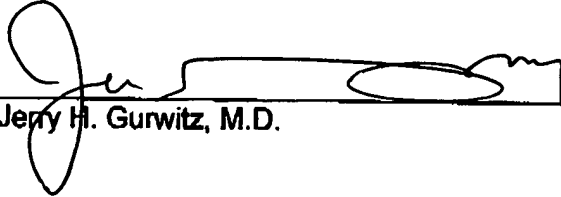
3. I have been a speaker at numerous professional meetings, conventions, institutes, forums, and medical schools. I am a co-author on many medical papers including papers relating to under-utilization of beta-blocker therapy in acute myocardial infarction, use of beta-blocker therapy after acute myocardial infarction, noncompliance with congestive heart failure therapy in the elderly, and the use of aspirin, beta-blockers and lipid lowering medications before recurrent acute myocardial infarction. My curriculum vitae is attached (Exhibit A).

4. Medical care ultimately costs less if successful interventions are done.
5. Numerous studies have shown the benefit of using beta-blockers, of using aspirin and of using lipid-lowering agents in patients who have had heart attacks, anginal symptoms, or are at high risk.
6. In my practice, I typically see elderly patients, many with a history of heart conditions.
7. Individuals with cardiovascular disorders are known to commonly utilize many medications. Older individuals are in the typical age group in which these cardio-preventative medications are required. Older patients are more susceptible to confusing their multiple medications and multiple treatment regimens.
8. Despite the industry's many years of knowledge of the benefits of using beta-blockers, of using platelet inhibitors such as aspirin and of using lipid-lowering agents in patients with established cardiac disease, and of the knowledge of compliance problems related to long-term treatments with multiple medications especially in older patients, the general approach is to educate physicians and patients.
9. Despite my intimate knowledge of adverse drug events, drug prescribing and utilization patterns, and clinical decision-making in the elderly patient population and despite the appreciably higher mortality rates associated with a recurrent acute myocardial infarction than that associated with a first acute myocardial infarction in the United States each year, I have not considered and never personally considered, nor has it ever occurred to me to combine beta-blockers and aspirin into a single dose as described in the above-described application.
10. The single-dose, beta-blocker and platelet inhibitor such as aspirin described in the present application appears to be novel.

Declarant further states that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under

Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 5/29/03

Name:   
Jerry H. Gurwitz, M.D.



## CURRICULUM VITAE

Date Prepared: January 15, 2003

Name: JERRY HOWARD GURWITZ  
Address: 33 Metcalf Street, Worcester, MA 01609  
Date of Birth: July 11, 1956  
Place of Birth: Montgomery, Alabama

### Education:

1978 A.B. Dartmouth College  
1983 M.D. University of Massachusetts Medical School

### Postdoctoral Training:

#### Internships and Residencies:

1983-84 Intern in Medicine, University of Massachusetts Hospital  
1984-86 Medical Resident, University of Massachusetts Hospital

### Fellowship:

1986-88 Clinical Fellow in Medicine, Division on Aging, Harvard Medical School  
1986-88 Faculty Development Program, Division of General Medicine, Harvard Medical School  
1986-89 Clinical Fellow in Medicine, Brigham and Women's Hospital  
1988-89 Research Fellow in Medicine, Beth Israel Hospital

### Licensure and Certification:

1985 Commonwealth of Massachusetts  
1986 Diplomate, American Board of Internal Medicine  
1988 Diplomate in Geriatric Medicine, American Board of Internal Medicine

### Academic Appointments:

1988-1993	Instructor in Medicine, Harvard Medical School
1993-1996	Assistant Professor of Medicine, Harvard Medical School
1996-	Lecturer on Ambulatory Care and Prevention, Harvard Medical School
1996-	Associate Professor of Medicine, University of Massachusetts Medical School
1996-	The Dr. John Meyers Chair in Primary Care Medicine, University of Massachusetts Medical School
1999	Professor of Medicine, University of Massachusetts Medical School

### Hospital/Clinical Appointments:

1988-1993	Geriatrician, Hebrew Rehabilitation Center for Aged, Boston
1988-1996	Attending Physician, Brockton/West Roxbury Veterans Administration Medical Center
1989-1996	Associate in Medicine, Beth Israel Hospital, Boston
1989-1996	Associate Physician, Brigham and Women's Hospital
1993-1996	Chief of Geriatric Medicine, Department of Medicine, Brockton Division, Brockton/West Roxbury Veterans Administration Medical Center
1996-	Chief, Section for Health Services Research, Division of General Medicine and Primary Care, UMASS-Memorial Healthcare
1996-	Staff Physician, Saint Vincent Hospital
1996-	Primary Care Physician, Fallon Clinic, Inc.

### Other Professional Positions:

1990-1996	Assistant Director, Harvard Geriatric Education Center
1996-	Executive Director, The Meyers Primary Care Institute
1997-	Associate Director for Managed Care, Harvard Upper New England Geriatric Education Center

### Awards and Honors:

1987-88	Charles A. Dana Foundation Fellow
1988-91	Merck Foundation Fellow in Geriatric Clinical Pharmacology
1991-96	Clinical Investigator Award, National Institute on Aging
1994	Fellow of the American College of Physicians
1994	Fellow of the American Geriatrics Society
1994	Fellow of the Gerontological Society of America
1996	Leon I. Goldberg Young Investigator Award, American Society for Clinical Pharmacology and Therapeutics

1996	Research Poster Award (Epidemiology), "Atrial Fibrillation in the Long-Term Care Setting," 1996 Annual Meeting of the American Geriatrics Society
1996	NESTOR Visiting Professor of Geriatric Medicine, The Netherlands Programme for Research on Aging
1996	Department of Veterans Affairs Certificate of Appreciation
1996	The Dr. John Meyers Chair in Primary Care Medicine, University of Massachusetts Medical School
1997	First International Visiting Scientist, Baycrest Centre for Geriatric Care, Ontario
1998	Outstanding Primary Care Researcher, University of Massachusetts Medical School Generalist Physician Initiative
1999	The Best of <i>Archives of Internal Medicine</i> 1999 <i>Arch Intern Med</i> 1999;159:561-7.
2000	Society of General Internal Medicine Initial Research Mentorship Award with Sumit Majumdar, MD
2001	William B. Abrams Award in Geriatric Clinical Pharmacology, American Society for Clinical Pharmacology and Therapeutics
2002	Alpha Omega Alpha Honor Medical Society, University of Massachusetts Medical School, Alumnus Member

#### Major Committee Assignments:

##### National and Regional:

1994	Committee member, Massachusetts Governor's Conference on Alzheimer's Disease
1995-2005	Expert Advisory Panel on Gerontology, The United States Pharmacopeial Convention (USP)
1996-	National Scientific Advisory Council, American Federation for Aging Research
1996	Oversight Committee for NIH-funded study: "Physical Activity Promotion for CHD Risk Reduction," Harvard Pilgrim Health Care
1996	Grant reviewer, The Physicians' Services Incorporated Foundation, Ontario, Canada
1996	Expert Advisory Panel on Geriatrics, The United States Pharmacopeial Convention (USP) Subcommittee on Botanicals
1996	Reviewer, Institute of Medicine Report: "Health Outcomes for Older People: Questions for the Coming Decade"
1996	Medication Error Reduction Initiative Coalition Member, American Medical Association
1996	Governing Board, The HMO Research Network

1997	Physician Prescribing Practices Expert Panel, Institute for Healthcare Improvement
1997- 2000	Representative of the American Geriatrics Society to the United States Pharmacopeial Convention (USP)
1997	American Heart Association Project on Guidelines for Uniform Reporting of Risk Reduction Outcomes - Section on Beta Blockers Post MI
1997-2001	Agency for Health Care Policy and Research Study Section Member Health Care Quality and Effectiveness Research
1997-1998	Prescribing Practices Collaborative, Institute for Healthcare Improvement, Advisory Group
1998	Reviewer for Robert Wood Johnson Changes in Health Care Financing and Organization Initiative
1999	SCRIPT Technical Expert Panel, Coalition for Quality in Medication Use
1999	American Society for Consultant Pharmacists, Technical Advisory Group, Fleetwood Project
1999	American Federation for Aging Research, Merck/AFAR Scholarship Program in Geriatric Clinical Pharmacology Awards Selection Committee
1999	National Health Care Quality Improvement Program (HCQIP) Initiative to Improve Quality of Care for Atrial Fibrillation Expert Panel
1999	Safety Monitoring Board for NIH-funded study "Aging, Hypertensive Therapy, and Blood Pressure Regulation"
1999	National Heart, Lung, and Blood Institute, Working Group on Adherence to Medical and Lifestyle Interventions
2000	Chair, Scientific Abstract Review Subcommittee, Provider/Organization-Centered Research, Society of General Internal Medicine, 23 <sup>rd</sup> Annual Meeting
2000	American Society for Consultant Pharmacists Foundation, "Pharmacist-Sensitive Outcomes" Advisory Board
2000	Guest Expert Advisor on Risk Management, FDA Division of Gastrointestinal and Coagulation Drug Products (alosetron)
2000-2005	Representative of the American Geriatrics Society to the United States Pharmacopeia (USP) Convention
2002	Massachusetts Department of Public Health Advisory Panel on Experimental/Investigational Medical and Surgical Procedures
2002	National Committee for Quality Assurance (NCQA) Medication Management Technical Subgroup

University of Massachusetts Medical School:

1996-2000	University of Massachusetts Medical School Admissions Committee
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- 1996- University of Massachusetts Medical School, Robert Wood Johnson Generalist Physician Initiative Directors' Group
- 1997 CME Advisory Committee Task Force, University of Massachusetts Medical Center, Managed Care Strategies and Physician Retraining
- 1998 Member, Search Committee, Department of Medicine Chair
- 1999 Chancellor's Task Force on Clinical and Population-based Research at University of Massachusetts Medical School
- 1999 Ad Hoc Search Committee for Outcomes Researcher, Department of Pediatrics
- 2000 Advisory Committee for the University of Massachusetts Medical School Macy Initiative in Health Communication
- 2000 Member, Search Committee, Department of Medicine Vice Chair for Research
- 2001 University of Massachusetts Medical School Clinical Research Advisory Committee
- 2002 University of Massachusetts Medical School/AAMC/Hartford Foundation Geriatrics Project – Consultant

Hospital:

Brigham and Women's Hospital

1993-1996 Medication Education and Management Committee

Brockton/West Roxbury Veterans Affairs Medical Center

1994-1995 Inpatient Consolidation Committee

Beth Israel Hospital

1988-1994 Transfusion Committee

1989-1992 Pharmacy and Therapeutics Committee

1990-1992 Therapeutic Drug Monitoring Committee

Hebrew Rehabilitation Center for Aged:



1987-1993	Pharmacy and Therapeutics Committee (Chairman)
1988-1993	Patient Care Assessment Committee
1988-1993	Utilization Review Committee
1990-1993	Transfusion Committee (Chairman)

#### Fallon Healthcare System

1996-	Advisory Team for Senior Health
1998-	Fallon Elder Service Plan Medical Advisory Committee
1999-	Institutional Review Board, Fallon Healthcare System and Saint Vincent Hospital
1999-	Technology Assessment Committee, Fallon Community Health Plan

#### Memberships, Offices and Committee Assignments in Professional Societies:

1985-	American Geriatrics Society
1988-	Gerontological Society of America
1989-1994	American Society for Clinical Pharmacology and Therapeutics Vice Chairperson, Section on Geriatric Clinical Pharmacology
1991-	American College of Physicians
1994-1997	American Society for Clinical Pharmacology and Therapeutics Chairperson, Section on Geriatric Clinical Pharmacology
1994-1997	Committee on Coordination of Scientific Sections, American Society for Clinical Pharmacology and Therapeutics
1995-1997	Board of Directors, American Society for Clinical Pharmacology and Therapeutics
1995-	International Society for Pharmacoepidemiology
1996-	Association for Health Services Research
1996-	Society of General Internal Medicine
1996-1997	Nominating Committee, American Society for Clinical Pharmacology and Therapeutics

#### Editorial Boards:

1992	Editorial Advisory Board, <i>AARP Prescription Drug Handbook</i>
1994-1999	Editorial Board, <i>Journal of the American Geriatrics Society</i>
1995	Deputy Editor, <i>Journal of Gerontology: MEDICAL SCIENCES</i>
1995-1999	Editorial Board, <i>Journal of Gerontology: MEDICAL SCIENCES</i>

#### Major Research Interests:

1. Adverse drug events
2. Drug prescribing and utilization patterns
3. Clinical decision-making in the elderly patient population

## Research Funding Information:

Past:

1988-1991	American Federation for Aging Research	PI	<i>NSAID-Associated Azotemia in the Elderly</i>
1989-1991	Ocean Spray Cranberries, Inc.	Co-investigator	<i>Prevention of Urinary Tract Infections in the Elderly</i>
1990-1991	NIH/Harvard GRTC (Pilot Project Grant)	PI	<i>Thiazide Diuretic Therapy and Initiation of Treatment for Diabetes Mellitus</i>
1991-1992	Geriatric Drug Therapy Institute	PI	<i>Constipation and Laxative Use in the Institutionalized Elderly</i>
1991-1992	NIH/RO1	Co-investigator	<i>Drug-Induced Parkinsonian Symptoms in the Elderly</i>
1992-1993	Kabi Pharmacia	Co-investigator	<i>The Cost-Effectiveness of Thrombolytic Therapy</i>
1992-1993	The Medical Foundation/Charles H. Farnsworth Trust	PI	<i>Compliance with Glaucoma Therapy in the Elderly</i>
1994-1995	Dupont Pharma	PI	<i>Clinical Decision-Making in the Use of Anticoagulant Therapy in Elderly Patients with Atrial Fibrillation</i>
1991-1996	NIH/KO8	PI	<i>Drug-Induced Illness in the Elderly: NSAIDs as a Model</i>
1992-1996	NIH/RO1	Co-investigator	<i>Improving Quality of Breast Cancer Care in Elderly Women</i>
1992-1996	NIH/RO1	Co-investigator	<i>Improving Compliance with Acute MI Practice Guidelines</i>
1996-1998	NIH/RO1	PI	<i>Prevention of Adverse Drug Events in the Nursing Home Setting</i>

1996-1998	NIH/RO1	Co-PI	<i>Risky Geriatric Benzodiazepine Use: Predictors and Trends</i>
1996-1998	NIH/RO1	Co-investigator	<i>Medicare Capitation and Quality of Care for Acute MI</i>
1996-1998	Dupont Pharma	PI	<i>Improving the Quality of Anticoagulation Care in the Long-Term Care Setting</i>
1997-2000	Health Resources and Services Administration	PI	<i>Geriatric Education Centers Training Program</i> (subcontract with Harvard Division on Aging)
1997-1998	Healey Endowment Fund	PI	<i>Medical Educators in the Managed Care Setting</i>
1997-1998	Merck, Inc.	PI	<i>Epidemiologic Study of Gastric and Duodenal Safety in Patients on Alendronate (subcontract with Harvard Pilgrim Health Care)</i>
1998-2000	Robert Wood Johnson Foundation	Co-investigator	<i>Impact of Physician Compensation Mechanisms on the Process of Care</i>
1998-1999	Solvay Pharmaceuticals, Inc.	PI	<i>Comprehensive Evaluation of a Premarin-to-Estratab Switch in a Managed Care Setting</i>
1998-2000	Partnership for Quality Education	Co-PI	<i>Managed Care of the Elderly</i>
1998-1999	American Society of Consultant Pharmacists Research and Education Foundation	PI	<i>Drug Benefit Plans for the Elderly under Managed Care</i>

#### Current

1996-2000	NIH/RO1	Co-investigator	<i>Adjuvant Tamoxifen Therapy in Old Age</i>
1998-2002	National Cancer Institute HMO Research Network/Cancer Research Network	Co-Investigator	

1997-2002	Food and Drug Administration	PI	<i>Consequences of Outpatient and Inpatient Drug Exposures</i> (Subcontract with Harvard Pilgrim Health Care)
1998-2000	National Institute on Aging	PI	<i>Adverse Drug Events in the Ambulatory Geriatric Setting</i>
2000-2003	Agency for Healthcare Research and Quality	PI	<i>Reduction of Adverse Drug Events in the Nursing Home</i>
2000-2003	Agency for Healthcare Research and Policy	Co-Investigator	<i>Centers for Education and Research on Therapeutics</i>
2000-2004	National Cancer Institute	Co-Investigator	<i>Breast Cancer Treatment Outcomes in Older Women</i>
2000-2004	Health Resources and Services Administration	Co-Investigator	<i>Geriatric Education Centers Training Programs</i>
2000-2003	Health Resources and Services Administration	PI	<i>Academic Administrative Units in Primary Care</i>

#### Principal Clinical and Hospital Services Responsibilities:

1988-1993	Staff Geriatrician, Hebrew Rehabilitation Center for Aged, Roslindale, MA
1989-1991	Attending Physician, Geriatric Consultation Service, Beth Israel Hospital, Boston, MA
1988-1996	Attending Physician, Geriatric Evaluation and Management Unit, West Roxbury Veterans Administration Medical Center, West Roxbury, MA
1989-1996	Attending Physician, Geriatric Outpatient Clinic, Brigham and Women's Hospital
1990-1996	Attending Physician, Medical Service, Brockton/West Roxbury Veterans Administration Medical Center, West Roxbury, MA
1992-1996	Attending Physician, Geriatric Consultation Service, Brigham and Women's Hospital
1993-1996	Attending Physician, Geriatrics and Extended Care Service, Brockton Division, Brockton/West Roxbury VAMC
1994-1996	Attending Physician, Medical Service, Brigham and Women's Hospital

1996- Teaching Attending Physician, University of Massachusetts Medical Center

**Major Administrative Responsibilities:**

1990-1996 Assistant Director, Harvard Geriatric Education Center  
 1993-1996 Chief of Geriatric Medicine, Department of Medicine, Brockton Division, Brockton/West Roxbury Veterans Administration Medical Center  
 1996- Executive Director, The Meyers Primary Care Institute  
 1996- Section Chief, Section for Health Services Research, Department of Medicine, Division of General Medicine, Primary Care, and Geriatrics, University of Massachusetts Medical School

**Self report of teaching:**

Local Contributions:

Harvard University: Harvard Medical School and Harvard School of Public Health

1988-1996 Introduction to Clinical Medicine  
 Introduction to Geriatrics and Long-Term Care  
 4-10 students  
 3 hours/year

1991 Department of Continuing Education  
 Primary Care Internal Medicine: Principles and Practices  
 Lecturer on Geriatric Clinical Pharmacology

1989-1992 Department of Continuing Education  
 Geriatric Medicine Course  
 Lecturer and Workshop Leader on Geriatric Clinical Pharmacology

1992-1993 Department of Continuing Education  
 New Pathways in General Medical Education  
 Workshop Leader

1991-1996 Pharmacology Module (New Pathway)  
 Tutorial Leader  
 9-10 students  
 4 weeks/year (25-30 hours)

- 1994-1996      Pain: Exploring Issues from Sensory Receptors to  
Societal Concerns (ABS Elective SM 512.0)  
5-6 students  
2 hours/year as Lecturer
- 1997, 1998,      Harvard School of Public Health Summer  
1999, 2001      Epidemiology Program  
5 fellows  
2 hours as Workshop Leader

#### Beth Israel Hospital

- 1989-1991      Geriatric Medicine Consultation Service  
Consult Attending  
1 geriatric medicine fellow  
1 month/year
- 1988-1996      Gerontology Division Seminars  
Presenter  
1-2 hours/year
- 1992            Department of Anesthesia and Critical Care  
Grand Rounds  
"Pharmacological Issues for the Elderly"

#### Hebrew Rehabilitation Center for Aged

- 1988-1993      Long-Term Care Clinical Rotation  
Attending  
1 geriatric medicine fellow; 0-1 residents; 0-1  
medical students  
3-4 months/year

#### Brockton/West Roxbury VAMC

- 1988-1996      Geriatric Evaluation and Management Unit Clinical  
Rotation  
Attending  
1 geriatric medicine fellow; 1 medical resident  
1 month/year
- 1990-1996      Medical Service  
Attending

1 resident; 2 interns; 2 medical students  
1 month/year

1993-1996 Medical Resident Noon Conference Series  
Presenter  
4-5 hours/year

#### Brigham and Women's Hospital

1989-1996 Geriatric Outpatient Evaluation Clinic  
Attending  
1 geriatric medicine fellow  
2 afternoons/month

1992-1996 Geriatric Medicine Consultation Service  
Attending  
1 geriatric medicine fellow  
1 month/year

1994-1996 Medical Service  
Attending  
1 resident; 2 interns; 1-2 medical students; 2  
pharmacy interns  
1 month/year

1995-1996 Brigham Internal Medicine Associates Residents'  
Practice  
Geriatric Medicine Attending  
4-5 interns and residents  
12 hours/year

#### University of Massachusetts Medical School

1996- Evidence Based Medicine Workshop (Department of  
Family Practice)  
Critical Appraisal of Articles Related to Diagnosis  
50 residents  
3 hours

1997- Lecturer, Nurse Practitioner Pharmacology Course  
11 students  
2 hours

1997-2001 Medical Service  
Teaching Attending

1 resident; 2 interns; 1 medical student  
1 month

- |            |   |
|------------|---|
| 2001, 2002 | Instructor, Introduction to Grant Writing Course,<br>University of Massachusetts Medical School<br>Department of Faculty Administration |
| 2001       | Interclerkship on Geriatric Medicine for 3 <sup>rd</sup> Year<br>Students<br>Lecturer<br>20 students                                    |
| 2002       | Geriatrics Miniselective for 4 <sup>th</sup> Year Students<br>Lecturer<br>5 students  |

**Saint Vincent Hospital/  
Worcester Medical Center**

- |      |   |
|------|---|
| 2002 | Medical Service<br>Teaching Attending<br>1 resident, 1 intern, 1 medical student<br>1 month |
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**Leadership Roles**

- |           |   |
|-----------|---|
| 1997-2002 | Interclerkship on Managed Care for 3 <sup>rd</sup> year students<br>Course Co-Director<br>115 medical students<br>16 hours  |
| 1997-2001 | Practicing and Teaching Evidence-Based Medicine<br>(Sponsored by RWJ Generalist Physician Initiative)<br>Course Co-Director<br>16 community-based UMMS faculty<br>6 hours |
| 1996-2002 | Residency Curriculum on Managed Care<br>(Sponsored by RWJ Generalist Physician Initiative)  |
| 2002      | Practicing and Teaching Evidence-Based Medicine<br>(Sponsored by RWJ Generalist Physician Initiative)<br>Course Co-Director<br>24 residents and fellows                   |



### Preparation of Teaching Materials/Curriculum Development

- 1992 Cardiovascular Pharmacology Case Study- New Pathway  
Principles of Pharmacology Course (Harvard Medical School - 1)  
"A Broken Heart"
- 1993 "H2 Blockers: Too Much of a Good Thing?"  
Brigham and Women's Hospital  
Medication Education and Management Program

### Selected Regional, National, and International Contributions:

#### Invited Presentations

- 1990 Symposium Speaker, "Old age - is it a risk factor for adverse drug reactions?" IVth World Conference on Clinical Pharmacology and Therapeutics, Heidelberg, Germany
- 1990 Speaker, Geriatrics Board Review Course, American Geriatrics Society and the American College of Physicians, New Orleans, Louisiana, "Principles of Geriatric Pharmacology," "Nursing Home Pharmacology," "Iatrogenesis"
- 1990 Symposium Speaker, "Unique Aspects of Prescribing for the Elderly," Office of the Inspector General, Office of Evaluation and Inspections, Washington, D.C.
- 1991 Panelist, Research Priorities for Studying the OBRA Drug Regulations, Health Care Financing Administration, Washington, D.C.
- 1991 Speaker, American College of Physicians Annual Meeting, New Orleans, Louisiana, "Pharmacoepidemiology- Understanding and Using Epidemiological Data to Advance Therapeutic Skills"
- 1992 Symposium Speaker, "Explaining the risks of nonsteroidal anti-inflammatory drug therapy in the elderly: pharmacokinetics, pharmacodynamics, aging physiology, or comorbidity?" Vth World Conference on Clinical Pharmacology and Therapeutics, Yokohama, Japan.

- 1992 Testimony to the House Small Business Subcommittee on Regulation, Business Opportunities, and Energy, "Drug Product Labeling and the Appropriate Use of Prescription and OTC Drugs in the Elderly," Washington, D.C. (April 28, 1992)
- 1992 Speaker, "Food and Drug Administration Guideline for the Study of Drugs in Elderly Patients," American College of Cardiology Workshop- Inclusion of Elderly Individuals in Clinical Trials: Cardiovascular Disease and Cardiovascular Therapy as a Model, Bethesda, Maryland.
- 1992 Continuing Medical Education Course Speaker, "Drug Therapy in the Elderly," American Geriatrics Society and the American College of Physicians, San Francisco, CA
- 1992 Seminar Speaker, Brown University Center for Gerontology and Health Care Research, "Clinical, Epidemiologic, and Policy Issues Regarding Medication Use in the Long-Term Care Setting"
- 1994 Speaker, Boston City Hospital Primary Care Training Program Lecture Series, "Prescribing to the Elderly"
- 1994 Speaker, Veterans Administration National Training Program- Medication Management in the Elderly, "NSAIDs: A Model for Studying Drug Risk in the Elderly"
- 1994 Speaker, Temple University School of Medicine Geriatric Board Review Course, "Principles of Pharmacology in the Elderly"
- 1994 Speaker, Clinical Pharmacology Division, Indiana University School of Medicine, "Issues in Geriatric Clinical Pharmacology"
- 1994 Panelist, National Institute on Aging/National Cancer Institute/Agency for Health Care Policy and Research Working Group on Pharmacology in Aging and Cancer
- 1995 Meet the Professor, 1995 Annual Meeting of the American Geriatrics Society, "Geriatric Clinical Pharmacology"

- 1995 Medical Grand Rounds, University of Massachusetts Medical Center, "Optimal Drug Therapy in the Elderly"
- 1995 Medical Grand Rounds, Dartmouth-Hitchcock Medical Center, "Geriatric Clinical Pharmacology for Internists"
- 1995 Seminar Speaker, Department of Health Care Policy, Harvard Medical School, "A Very Large Acute Myocardial Infarction Database: Strengths and Weaknesses of Large Numbers"
- 1996 Invited Speaker, "Reduction of Bacteriuria and Pyuria following Ingestion of Cranberry Juice" 1996 Annual Meeting of the International Life Sciences Institute, Cancun, Mexico.
- 1996 Pharmacoepidemiology Seminary Series, Harvard School of Public Health, Department of Epidemiology, "Clinical Decision-Making in the Use of Warfarin in the Frail Elderly"
- 1996 NESTOR Visiting Professor of Geriatric Medicine, The Netherlands Programme for Research on Aging, "Introduction to Geriatric Clinical Pharmacology," University Hospital Nijmegen, Nijmegen, The Netherlands
- 1996 Invited Speaker, "Trends in Thrombolytic Use in the Elderly: Findings from the National Registry of Myocardial Infarction," Annual Drug Information Association Meeting on Statistical Issues in the Pharmaceutical Industry.
- 1996 Medical Grand Rounds, Brockton/West Roxbury VA Medical Center, "Clinical Decision-Making: Use of Warfarin in the Frail Elderly"
- 1996 Invited Speaker, "Drug Therapy in the Elderly", Successful Aging Course for visiting Japanese delegation, Harvard Geriatric Education Center
- 1996 Invited Speaker, "Polypharmacy in the Nursing Home", Massachusetts Extended Care Federation
- 1996 Pediatric Grand Rounds, University of Massachusetts Medical Center, "The Truth About Evidence-Based Medicine"

- 1996 Medical Grand Rounds, COLUMBIA Metrowest Medical Center, "Drug Therapy in the Elderly"
- 1996 Family Practice Grand Rounds, The Memorial Hospital, "Optimal Drug Therapy in the Elderly"
- 1996 Medical Grand Rounds, Champlain Valley Physicians Hospital Medical Center, Plattsburgh, NY, "Optimal Drug Therapy in the Elderly"
- 1997 Medical Grand Rounds, The Memorial Hospital, "Optimal Drug Therapy in the Elderly"
- 1997 Keynote Speaker, Health Care Financing Administration Office of Managed Care, Medications Quality Improvement Project Meeting
- 1997 Annual Meeting of the American Geriatrics Society and the American Federation for Aging Research, Symposium Speaker, "Is Oral Anticoagulation Risky? Evaluating the Reality."
- 1997 First Annual Symposium of University of Massachusetts Medical Center Heart Institute (Contemporary Strategies in the Treatment of Ischemic Heart Disease), Speaker, "Cardiac Care in an Aging Population"
- 1997 Annual Meeting of the Academy of Managed Care Pharmacy, Speaker, "Risk Management Issues in Pharmaceutical Care for the Elderly"
- 1997 Summer Institute on Aging Research sponsored by the National Institute on Aging, Lecturer, "Introduction to Geriatric Pharmacoepidemiology"
- 1997 University of Massachusetts Medical Center Second Annual Symposium on Thrombosis, Thrombolysis, and Anticoagulation for the Clinician, "Managing Anticoagulation in the Elderly"
- 1997 Boston University School of Medicine Epidemiology of Aging Course, Lecturer, "Pharmacoepidemiology in the Elderly"
- 1998 Boston University School of Medicine

Epidemiology of Aging Course, Lecturer,  
 “Pharmacoepidemiology in the Elderly”

- 1998 Elder Care 1998, Plenary Speaker, “Medication Issues in the Elderly,” Worcester, MA
- 1998 Annual Meeting of the American Geriatrics Society, Update on Long-Term Care: “The Prescribing Cascade”
- 1998 Northeast Group on Educational Affairs 1998 Regional Meeting, “Teaching and Learning in the Era of Evidence-Based Medicine”
- 1998 Quality of Care Seminar Series, Harvard School of Public Health, “The Quality of Anticoagulation Care in the Frail Elderly”
- 1998 Drug Information Association Annual Meeting, Boston, MA, “An Update on Drugs in the Elderly – The Therapeutic Cascade”
- 1998 University of Massachusetts Third Annual Thrombosis, Thrombolysis and Anticoagulation for the Clinician Symposium; “The Safety and Efficacy of Anticoagulants in the Elderly”
- 1998 Boston University Center for Excellence in Geriatrics Boston, MA, “Polypharmacy”
- 1998 Harvard Division on Aging Grand Rounds, “Anticoagulation Care in the Elderly”
- 1998 Blue Cross Blue Shield Association Medicaid and Medicare Best Practices Forum, “Polypharmacy Management in Medicare Patients”
- 1999 Boston University School of Medicine  
 Epidemiology of Aging Course, Lecturer,  
 “Pharmacoepidemiology in the Elderly”
- 1999 Workshop, Mock Grants Review Study Section, Sponsored by the Agency for Health Care Policy and Research, HMO Research Network Meeting

- 1999 Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics, "Strategies to Detect and Reduce Adverse Drug Events in the Nursing Home"
- 1999 Plenary Talk: "Considerations in Designing an 'Ideal' Medication Use System" at National Interdisciplinary Conference Sponsored by the Joint Commission of Pharmacy Practitioners – Re-Engineering the Medication Use System
- 1999 Harvard Medical School Department of Continuing Education – Topics in Long-Term Care, "Medication Use In the Nursing Home"
- 1999 Berkshire Medical Center Medical Grand Rounds, "Drug Prescribing in the Elderly"
- 1999 UMASS Memorial Health Care, Department of Medicine Grand Rounds, "Thrombolytic Therapy in the Elderly – A Dilemma in Therapeutic Decision-Making"
- 1999 Saint Vincent Hospital, Department of Medicine Grand Rounds, "Thrombolytic Therapy in the Elderly – A Dilemma In Therapeutic Decision-Making"
- 1999 National PACE Association Annual Conference, "Optimal Drug Therapy for the Elderly"
- 1999 University of Connecticut Center on Aging Geriatrics Grand Rounds, "Drug Therapy in the Elderly"
- 2000 Harvard Medical School Division on Aging Managed Care for the Elderly Conference, "Medication Issues"
- 2000 American Heart Association Scientific Conference on Existing Databases: Do they hold the answers to clinical questions in geriatric cardiovascular disease and stroke? "Acute Myocardial Infarction, Thrombolytic Therapy"
- 2000 Worcester Medical Center Grand Rounds, "To Err is Human: Preventing Medication Errors and Adverse Drug Events in the Elderly"

- 2000 8<sup>th</sup> Annual Symposium on Geriatric Research and Health Care Policy, Hebrew Rehabilitation Center for Aged, "Making Drug Therapy Safer for the Elderly"
- 2000 Fifth Annual UMASS Thrombosis, Thrombolysis, and Anticoagulation for the Clinician Symposium, "Warfarin"
- 2000 Hospital of Saint Raphael, Medical Grand Rounds, "Optimal Drug Therapy in the Elderly"
- 2001 University of Massachusetts and UMASS Memorial Medical Grand Rounds, "To Err is Human, Making Medication Use Safer for the Elderly"
- 2001 Geriatric Educational National Retreat: Integrating Geriatrics into Neurology and Psychiatry, Sponsored by the American Geriatrics Society and the John A. Hartford Foundation, "Geriatric Clinical Pharmacology"
- 2001 Centers for Education and Research on Therapeutics, University of North Carolina, "Improving Communication of Drug Risk Information to Prevent Patient Injury"
- 2001 National Council on Patient Information and Education (NCPPIE), 13<sup>th</sup> National Conference, Bethesda, MD "Promoting Safe Medication Use in Long-Term Care Settings"
- 2001 18<sup>th</sup> Annual Peter Lamy Conference – Building Bridges in Drug Therapy and Aging, University of Maryland School of Pharmacy, Keynote Speaker, "To Err is Human: Making Medication Use Safer for Elderly Patients"
- 2001 54<sup>th</sup> Annual Scientific Meeting of the Gerontological Society of America. Symposium Discussant: "Improving Medication Use in Home-Health and other Frail Community-Dwelling Elderly."
- 2002 Visiting Lecturer, Georgetown University Medical School, Clinical Pharmacology 45h Year Course, "Drug Therapy in the Elderly."
- 2002 Harvard Medical School Division on Aging Geriatric Grand Rounds, "Improving the Safety of Medication Use in the Elderly".

- 2002 Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics, "Special Populations and Pharmacotherapy"
- 2002 Institute of Medicine Workshop, "Role of Providers in the Clinical Research Enterprise"



## Bibliography

### Journals:

1. Gurwitz JH, Goldberg RJ, Holden A, Knapic N, Ansell J. Age-related risks of long-term oral anticoagulant therapy. *Arch Intern Med* 1988; 148:1733-6.
2. Goldberg RJ, Gore JM, Gurwitz JH, Alpert JS, Brady P, Strohsnitter W, Chen Z, Dalen JE. The impact of age on the incidence and prognosis of initial acute myocardial infarction: the Worcester Heart Attack Study. *Am Heart J* 1989; 117:543-9.
3. Gurwitz JH, Avorn J, Ross-Degnan D, Lipsitz LA. Nonsteroidal anti-inflammatory drug-associated azotemia in the very old. *JAMA* 1990; 264:471-75.
4. Gurwitz JH, Osganian V, Goldberg RJ, Chen Z, Gore JM, Alpert JS. Diagnostic testing in acute myocardial infarction: Does patient age influence utilization patterns? *Am J Epidemiol* 1991; 134:948-57.
5. Gurwitz J, Clive DM, Rossetti R, Stoff JS. The effects of nonsteroidal anti-inflammatory drugs on renal function in the healthy old. *J Nephrol* 1991; 3:163-167.
6. Clive DM, Gurwitz J, Rossetti R. The effects of nonsteroidal anti-inflammatory drug therapy on potassium homeostasis in healthy subjects. *Am J Kidney Dis* 1992; 19:16-21.
7. Gurwitz JH, Noonan JP, Sanchez M, Prather W. Barium enemas in the frail elderly. *Am J Med* 1992; 92:41-44.
8. Gurwitz JH, Noonan JP, Soumerai SB. Reducing the use of H<sub>2</sub> receptor antagonists in the long-term care setting. *J Am Geriatr Soc* 1992; 40:359-364.
9. Gurwitz JH, Avorn J, Ross-Degnan D, Choodnovskiy I, Ansell J. Aging and the anticoagulant response to warfarin. *Ann Intern Med* 1992; 116:901-904.
10. Goldberg RJ, Gurwitz JH, Yarzebski J, Landon J, Gore JM, Alpert JS. Patient delay and receipt of thrombolytic therapy among patients with acute myocardial infarction: a community wide perspective. *Am J Cardiol* 1992; 70:421-425.
11. Gurwitz JH, Col NF, Avorn J. The exclusion of elderly and women from clinical trials in acute myocardial infarction. *JAMA* 1992; 268:1417-1422.

12. Gurwitz JH, Goldberg RJ, Chen Z, Gore JM, Alpert JS. Beta-blocker therapy in acute myocardial infarction: Evidence for underutilization in the elderly. *Am J Med* 1992; 93:605-610.
13. Pagley PR, Yarzebski J, Goldberg R, Chen Z, Chiriboga D, Dalen P, Gurwitz J, Alpert JS, Gore JM. Gender differences in the therapeutic management of patients with acute myocardial infarction: a multi-hospital, community-based perspective. *Arch Intern Med* 1993; 153:625-629.
14. Chiriboga DE, Yarzebski J, Goldberg RJ, Chen Z, Gurwitz J, Gore JM, Alpert JS, Dalen JE. A community-wide perspective of gender differences and temporal trends in the use of diagnostic and revascularization procedures for acute myocardial infarction: the Worcester Heart Attack Study. *Am J Cardiol* 1993; 71:268-273.
15. Gurwitz JH, Bohn RL, Glynn RJ, Monane M, Mogun H, Avorn J. Antihypertensive drug therapy and initiation of treatment for diabetes mellitus. *Ann Intern Med* 1993; 118:273-278.
16. Gurwitz JH, Glynn RJ, Monane M, Everitt DE, Gilden D, Smith N, Avorn J. Adherence to treatment for glaucoma among the elderly. *Am J Public Health* 1993; 83:711-716.
17. Gurwitz JH, Bohn RL, Glynn RJ, Monane M, Mogun H, Avorn J. Glucocorticoids and the risk for initiation of hypoglycemic therapy. *Arch Intern Med* 1994; 154:97-101.
18. Glynn RJ, Gurwitz JH, Bohn RL, Monane M, Avorn J. Old age and race as determinants of initiation of glaucoma therapy. *American Journal of Epidemiology* 1993; 138:395-406.
19. Avorn J, Glynn RJ, Gurwitz JH, Bohn R, Monane M, Gilden D, Everitt DE, Choodnovskiy I. Adverse pulmonary effects of topical beta-blockers used in the treatment of glaucoma. *J Glaucoma* 1993; 2:158-165.
20. Ross-Degnan D, Soumerai SB, Fortess EE, Gurwitz JH. Examining product risk in context: market withdrawal of zomepirac sodium as a case study. *JAMA* 1993; 270:1937-1942.
21. Rochon PA, Gurwitz JH, Simms RW, Fortin PR, Felson DT, Minaker KL, Chalmers TC. A study of manufacturer supported trials of nonsteroidal anti-inflammatory drugs: Reporting and documentation of efficacy and toxicity results. *Arch Intern Med* 1994; 154:157-163.

22. Monane M, Bohn RL, Gurwitz JH, Glynn RJ, Avorn J. Noncompliance with congestive heart failure therapy in the elderly. *Arch Intern Med* 1994; 154:433-437.
23. Col NF, Gurwitz JH, Alpert JS, Goldberg RJ. Frequency of inclusion of patients with cardiogenic shock in trials of thrombolytic therapy. *Am J Cardiol* 1994; 73:149-157.
24. Gurwitz JH, Sanchez-Cross MT, Eckler MA, Matulis J. The epidemiology of adverse and unexpected events in the long-term care setting. *J Am Geriatr Soc* 1994; 42:33-38.
25. Pickering T-D, Gurwitz JH, Zaleznik D, Noonan JP, Avorn J. The appropriateness of oral fluoroquinolone prescribing in the long-term care setting. *J Am Geriatr Soc* 1994; 42:28-32.
26. Monane M, Bohn RL, Gurwitz JH, Glynn RJ, Choodnovskiy I, Avorn J. Topical glaucoma medications and cardiovascular risk in the elderly. *Clin Pharmacol Ther* 1994; 55:76-83.
27. Avorn J, Monane M, Gurwitz JH, Glynn RJ, Choodnovskiy I, Lipsitz L. Reduction of bacteriuria and pyuria after ingestion of cranberry juice. *JAMA* 1994; 271:751-754.
28. Bohn RL, Glynn RJ, Gurwitz JH, Everitt DE, Gilden D, Avorn J. Patterns of glaucoma medication use in the elderly: 1980-1990. *J Glaucoma* 1994; 3:259-264.
29. Gurwitz JH, Goldberg RJ, Chen Z, Gore J, Alpert JS. Recent trends in hospital mortality of acute myocardial infarction: have improvements been realized for all age groups? The Worcester Heart Attack Study (1975-1990) *Arch Intern Med* 1994; 154:2202-2208.
30. Rochon PA, Gurwitz JH, Cheung CM, Hayes J, Chalmers TC. Evaluating the quality of articles published in journal supplements compared to those published in the parent journal. *JAMA* 1994; 272:108-113.
31. Harari D, Gurwitz JH, Choodnovskiy I, Minaker KL, Avorn J. Constipation: assessment and management in an institutionalized elderly population. *J Am Geriatr Soc* 1994; 42:947-952.
32. Gurwitz JH, Avorn J, Bohn RL, Glynn RJ, Monane M, Mogun H. Initiation of antihypertensive treatment during nonsteroidal anti-inflammatory drug therapy. *JAMA* 1994; 272:781-786.

33. Gurwitz JH, Field TS, Glynn RJ, Manson JE, Avorn J, Taylor JO, Hennekens CH. Risk factors for non-insulin-dependent diabetes mellitus requiring treatment in the elderly. *J Am Geriatr Soc* 1994; 42:1235-1240.
34. Avorn J, Bohn R, Mogun H, Gurwitz J, Monane M, Everitt D, Walker A. Neuroleptic drug exposure and treatment of parkinsonism in the elderly: a case-control study. *Am J Med* 1995; 99:48-54.
35. Monane M, Gurwitz JH, Lipsitz LA, Glynn RJ, Choodnovskiy I, Avorn J. Epidemiologic and diagnostic aspects of bacteriuria: a longitudinal study of elderly women. *J Am Geriatr Soc* 1995; 43:618-622.
36. Monane M, Glynn RJ, Gurwitz JH, Bohn RL, Levin R, Avorn J. Trends in medication choices for hypertension in the elderly: the decline of the thiazides. *Hypertension* 1995; 25:1045-1051.
37. Kalish SC, Gurwitz JH, Krumholz HM, Avorn J. A cost-effectiveness model of thrombolytic therapy for acute myocardial infarction. *J Gen Intern Med* 1995; 10:321-330.
38. Kalish SC, Bohn RL, Mogun H, Gurwitz JH, Avorn J. Antipsychotic prescribing patterns and the treatment of extrapyramidal symptoms in older people. *J Am Geriatr Soc* 1995; 43:967-973.
39. Avorn J, Gurwitz JH, Bohn RL, Mogun H, Monane M, Walker A. L-dopa therapy following metoclopramide use. *JAMA* 1995; 274:1780-1782.
40. Harari D, Gurwitz JH, Choodnovskiy I, Avorn J, Minaker KL. Correlates of regular laxative use in frail elderly persons. *Am J Med* 1995; 99:513-518.
41. Gurwitz JH, McLaughlin TJ, Fish LS. The effect of an Rx-to-OTC switch on medication prescribing patterns and utilization of physician services: the case of vaginal anti-fungal products. *Health Services Research* 1995; 30:672-685.
42. Weinberg AD, Pols JK, Gurwitz JH. Are antibiotics overutilized for treatment of early stage fevers in long-term care patients? *J Subacute Care* April 1996;7-10.
43. Col NF, McLaughlin TJ, Soumerai SB, Hosmer DW, Yarzebski J, Gurwitz JH, Gore JM, Goldberg RJ. The impact of clinical trials on the use of medications for acute myocardial infarction: results of a community-based study. *Arch Intern Med* 1996;156:54-60.
44. Gurwitz JH, Everitt DE, Monane M, Glynn RJ, Choodnovskiy I, Beaudet MP, Avorn J. The impact of ibuprofen on the efficacy of antihypertensive treatment with

- hydrochlorothiazide in elderly persons. *J Gerontol: MEDICAL SCIENCES* 1996; 51A:M74-M79.
45. Harari D, Gurwitz JH, Avorn J, Bohn R, Minaker KL. Bowel pattern in relation to age and gender: findings from the National Health Interview Survey and clinical implications. *Arch Intern Med* 1996; 156:315-320.
  46. Gurwitz JH, Gore JM, Goldberg RJ, Rubison M, Chandra N, Rogers WJ, for the participants in the National Registry of Myocardial Infarction. Recent age-related trends in thrombolytic therapy use among patients with acute myocardial infarction. *Ann Intern Med* 1996; 124:283-291.
  47. McLaughlin TJ, Soumerai SB, Willison DJ, Gurwitz JH, Borbas C, Guadagnoli E, McLaughlin B, Morris N, Chun Cheng S, Hauptman PJ, Antman E, Casey L, Asinger R, Gobel F. Adherence to national consensus guidelines for drug treatment of suspected acute myocardial infarction in community hospitals: evidence for undertreatment in women and the elderly. *Arch Intern Med* 1996; 156:799-805.
  48. Monane M, Bohn RL, Gurwitz JH, Glynn RJ, Levin R, Avorn J. A population-based study of compliance with antihypertensive therapy: role of age, gender, and race. *Am J Publ Health* 1996;86:1805-1808.
  49. Monane M, Gurwitz JH, Bohn RL, Glynn RJ, Levin R, Monette J, Avorn J. The impact of thiazide diuretics on the initiation of lipid-reducing agents in the elderly: a population-based analysis. *J Am Geriatr Soc* 1997;45:71-75.
  50. Chandra H, Yarzebski J, Goldberg RJ, Savageau J, Singleton C, Gurwitz JH, Gore JM. Age-related trends (1986-1993) in the use of thrombolytic agents in patients with acute myocardial infarction: The Worcester Heart Attack Study. *Arch Intern Med* 1997;157:741-746.
  51. McLaughlin TJ, Soumerai SB, Willison DJ, Gurwitz JH, Gao X, Borbas C, Gobel F. The impact of comorbidity on use of thrombolytics and aspirin in acute myocardial infarction. *J Gen Intern Med* 1997;12:1-6.
  52. Harari D, Gurwitz JH, Avorn J, Bohn R, Minaker KL. How do older persons define constipation? Implications for therapeutic management. *J Gen Intern Med* 1997;12:63-66.
  53. Gurwitz JH, Monette J, Rochon PA, Eckler MA, Avorn J. Atrial fibrillation and stroke prevention with warfarin in the long-term care setting. *Arch Intern Med* 1997;157:978-983.

54. Gurwitz JH, McLaughlin TJ, Willison DJ, Guadagnoli E, Hauptman PJ, Gao X, Soumerai SB. Delayed presentation in patients with acute myocardial infarction. *Ann Intern Med* 1997;126:593-599.
55. Harari D, Sarkarati M, Gurwitz JH, McGlinchey-Berroth G, Minaker FL. Constipation-related symptoms and bowel program in individuals with spinal cord injury. *Spinal Cord* 1997;35:394-401.
56. Monane M, Bohn RL, Gurwitz JH, Glynn RJ, Levin R, Avorn J. The effects of initial drug choice and co-morbidity on antihypertensive therapy compliance: results from a population-based study in the elderly. *Am J Hypertension* 1997;10:697-704.
57. Monette J, Gurwitz JH, Rochon PA, Avorn J. Physician attitudes concerning warfarin for stroke prevention in atrial fibrillation: results of a survey of long-term care practitioners. *J Am Geriatr Soc* 1997;45:1060-1065.
58. Guadagnoli E, Shapiro C, Gurwitz JH, Silliman RA, Weeks JC, Borbas C, Soumerai SB. Age-related patterns of care: evidence against ageism in the treatment of early stage breast cancer. *J Clin Oncology* 1997;15:2338-2344.
59. Gurwitz JH, Kalish SC, Bohn RL, Glynn RJ, Monane M, Mogun H, Avorn J. Thiazide diuretics and the initiation of anti-gout therapy. *J Clin Epidemiology* 1997;50:953-959.
60. Gurwitz JH, Yeomans SM, Glynn RJ, Lewis BE, Levin R, Avorn J. Patient Noncompliance in the managed care setting: the case of medical therapy for glaucoma. *Medical Care* 1998;36:357-359.
61. Guadagnoli E, Weeks JC, Shapiro C, Soumerai SB, Gurwitz JH, Borbas C. Use of breast-conserving surgery for treatment of stage I and state II breast cancer. *J Clin Oncology* 1998;16:101-106.
62. Field TS, Baldor RA, Casey LM, Chuman A, Lasser D, Ehrlich A, Gurwitz JH. Introducing managed care to the medical school curriculum: impact on student attitudes. *Am J Managed Care* 1998;4:1015-1021.
63. Soumerai SB, McLaughlin TJ, Gurwitz JH, Guadagnoli E, Hauptman PJ, Borbas C, Morris N, McLaughlin B, Gao X, Willison DJ, Asinger R, Gobel F. Effect of local medical opinion leaders on quality of care for acute myocardial infarction, a randomized controlled trial. *JAMA* 1998;279:1358-1363.
64. Rochon PA, Clark JP, Binns M, Patel V, Gurwitz JH. Reporting of gender specific information in clinical trials of drug therapy for myocardial infarction: *CMAJ* 1998;159:321-327.

65. Goldberg RJ, Mooradd M, Gurwitz JH, Rogers WJ, French WJ, Barron HV, Gore JM. Impact of time to treatment with tissue plasminogen activator on morbidity and mortality following acute myocardial infarction (The Second National Registry of Myocardial Infarction) *Am J Cardiol* 1998;82:259-264.
66. Guadagnoli E, Shapiro CL, Weeks JC, Gurwitz JH, Borbas C, Soumerai SB. The quality of care for treatment of early-stage breast cancer: Is it consistent with national guidelines? *Cancer* 1998;83:302-309.
67. Willison DJ, Soumerai SB, McLaughlin TJ, Gurwitz JH, Gao X, Guadagnoli E, Pearson S, Hauptman P, McLaughlin B. Consultation between cardiologists and generalists in the management of acute myocardial infarction: implications for quality of care. *Arch Intern Med* 1998;158:1778-1783.
68. Goldberg RJ, McCormick D, Gurwitz JH, Yarzebski J, Lessard D, Gore JM. Age-related trends in short and long-term survival following acute myocardial infarction: a twenty-year population-based perspective (1975-1995). *Am J Cardiol* 1998;82:1311-1317.
69. Gurwitz JH, Gore JM, Goldberg RJ, Barron HV, Breen T, Rundle AC, Sloan MA, French W, Rogers WJ. Risk for intracranial hemorrhage after tissue plasminogen activator treatment for acute myocardial infarction. Participants in the National Registry of Myocardial Infarction 2. *Ann Intern Med* 1998;129:597-604.
70. Donahue JG, Andrade SE, Cain EM, Defore TA, Goodman MJ, Gurwitz JH, Platt R. Lamotrigine and severe skin eruptions. *Pharmacoepidemiology and Drug Safety* 1998;7:415-417.
71. Rochon PA, Clark JP, Binns MA, Patel V, Gurwitz JH. Reporting of gender-related information in clinical trials of drug therapy for myocardial infarction. *CMAJ* 1998;159:321-7.
72. Goldberg RJ, Mooradd M, Gurwitz JH, Rogers WJ, French WJ, Barron HV, Gore JM. Impact of time to treatment with tissue plasminogen activator on morbidity and mortality following acute myocardial infarction (The second National Registry of Myocardial Infarction). *Am J Cardiol* 1998;82:259-64.
73. Lasser D, Chuman A, Ferrara E, Gurwitz JH. Use of a mini-grant program to stimulate generalist training in a university community. *Acad Med* 1999;74 (1 suppl):S30-S35.
74. Andrade SE, Gurwitz JH, Fish LS. The effect of an Rx-to-OTC switch on medication prescribing patterns and utilization of physician services: the case of H2-receptor antagonists. *Med Care* 1999;37:424-430.

75. Glynn RJ, Monane M, Gurwitz JH, Choodnovskiy I, Avorn J. Agreement between drug treatment and a discharge diagnosis of diabetes mellitus in the elderly. *Am J Epidemiology* 1999;149:541-9.
76. McCormick D, Gurwitz JH, Lessard D, Yarzebski J, Gore JM, Goldberg RJ. Use of aspirin, beta blockers, and lipid lowering medications before recurrent acute myocardial infarction: Missed opportunities in prevention? *Arch Intern Med* 1999;159:561-567.
77. Field TS, Gurwitz JH, Glynn RJ, Salive ME, Gaziano JM, Taylor JO, Hennekens CH. The renal effects of nonsteroidal anti-inflammatory drugs in the elderly: findings from the established populations for epidemiologic studies of the elderly. *J Am Geriatr Soc* 1999;47:507-511.
78. McCormick D, Gurwitz JH, Savageau J, Yarzebski J, Gore JM, Goldberg RJ. Differences in discharge medication after acute myocardial infarction in patients with HMO and fee-for-service medical insurance. *J Gen Intern Med* 1999;14:73-81.
79. Andrade SE, Gurwitz JH, Fish LS. The effect of an Rx-to-OTC switch on medication prescribing patterns and utilization of physician services: the case of H<sub>2</sub>-receptor antagonists. *Med Care* 1999;37:424-430.
80. Goldberg RJ, Samad NA, Yarzebski J, Gurwitz J, Bigelow C, Gore JM. Temporal trends in cardiogenic shock complicating acute myocardial infarction. *N Engl J Med* 1999;340:1162-8.
81. Glynn RJ, Monane M, Gurwitz JH, Choodnovskiy I, Avorn J. Agreement between drug treatment data and a discharge diagnosis of diabetes mellitus in the elderly. *Am J Epidemiol* 1999;149:541-9.
82. Soumerai SB, McLaughlin TJ, Gurwitz JH, Pearson S, Christiansen C, Borbas C, Morris N, McLaughlin B, Gao Xiaoming, Ross-Degnan D. Timeliness and quality of care for elderly patients with acute myocardial infarction under HMO vs. fee-for service insurance. *Arch Intern Med* 1999;159:2013-2020.
83. Goldberg RJ, Gurwitz JH, Gore JM. Duration of, and temporal trends (1994-1997) in, prehospital delay in patients with acute myocardial infarction: The Second National Registry of Myocardial Infarction. *Arch Intern Med* 1999;159:2141-2147.
84. Glynn RJ, Monane M, Gurwitz JH, Choodnovskiy I, Avorn J. Aging, comorbidity and reduced rates of drug treatment for diabetes mellitus. *J Clin Epidemiol* 1999;52:781-790.



85. Majumdar SR, Gurwitz JH, Soumerai SB. Undertreatment of hyperlipidemia in the secondary prevention of coronary artery disease. *J Gen Intern Med* 1999;12:711-717.
86. Rochon PA, Anderson GM, Tu JV, Gurwitz JH, Clark JP, Shear NH, Lau P. Age- and gender-related use of low-dose therapy: the need to manufacture low-dose therapy and evaluate the minimum effective dose. *J Am Geriatr Soc* 1999;47:954-959.
87. McLaughlin TJ, Gurwitz JH, Willison DJ, Gao X, Soumerai SB. Delayed thrombolytic treatment of elderly patients with acute myocardial infarction. *J Am Geriatr Soc* 1999;47:1222-1228.
88. Rochon PA, Anderson GM, Tu JV, Clark JP, Gurwitz JH, Szalai JP, Lau P. Use of beta-blocker therapy after acute myocardial infarction in Ontario. *CMAJ* 1999;161:1403-1408.
89. Brass LM, Lichtman JH, Wang Y, Gurwitz JH, Radford MJ, Krumholz HM. Intracranial hemorrhage associated with thrombolytic therapy for elderly patients with acute myocardial infarction. Results from the Cooperative Cardiovascular Project. *Stroke* 2000;31:1802-1811.
90. Barron HV, Rundle A, Gore JM, Gurwitz JH, Penney T. Intracranial hemorrhage rates and effect of immediate beta-blocker use in patients with acute myocardial infarction treated with tissue plasminogen activator. *Am J Cardiology* 2000;85:294-298.
91. Bohn RL, Gurwitz JH, Yeomans SM, Glynn RJ, Pasquale LR, Walker AM, Avorn J. Which patients are treated for glaucoma? An observational analysis. *J Glaucoma* 2000;9:38-44.
92. Chan KA, Andrade SE, Boles M, Buist DSM, Chase GA, Donahue JG, Goodman MJ, Gurwitz JH, LaCroix AZ, Platt R. HMG-CoA reductase inhibitors and reduced risk of fracture among older women. *The Lancet* 2000;355:2185-2188.
93. Andrade SE, Gurwitz JH, Cernieux J, Fish LS. Evaluation of a formulary switch from conjugated to a esterified estrogens in a managed care setting. *Medical Care* 2000;38:970-975.
94. Gurwitz JH, Field T, Avorn J, McCormick D, Jain S, Eckler M, Benser B, Edmonson AC, Bates DW. Incidence and preventability of adverse drug events in the nursing home setting. *Am J Med* 2000;109:87-94.
95. Guadagnoli E, Soumerai SB, Gurwitz JH, Borbas C, Shapiro CL, Weeks JC, Morris N. Improving discussion of surgical treatment options for patients with breast

cancer: local medical opinion leaders versus performance feedback. *Breast Cancer Research and Treatment* 2000;61:171-175.

96. Rochon PA, Tu JV, Anderson GM, Gurwitz JH, Clark JP, Lau P, Czalai JP, Sykora K, Naylor D. Rate of heart failure and equivalent 1-year survival for older people receiving low-dose beta-blocker therapy after myocardial infarction. *The Lancet* 2000;356:639-644.
97. Harrold LR, Yood RA, Andrade SE, Reed JI, Cernieux J, Straus W, Weeks M, Lewis B, Gurwitz JH. Evaluating the predictive value of osteoarthritis diagnoses in an administrative database. *Arthritis Rheum* 2000;43:1881-1885.
98. Harrold LR, Gurwitz JH, Field TS, Andrade SE, Fish LS, Jarry PD, Yood R. The diffusion of a novel therapy into clinical practice: the case of sildenafil. *Arch Intern Med* 2000;160:3401-3405.
99. Smalley W, Shatin D, Wysowski DK, Gurwitz J, Andrade SE, Goodman M, Chan KA, Platt R, Schech SD, Ray WA. Contraindicated use of cisapride: the impact of an FDA regulatory action. *JAMA* 2000; 284:3036-3039.
100. Goldberg RJ, Gore JM, Thompson CA, Gurwitz JH. Recent magnitude of, and temporal trends (1994-1997) in the incidence and hospital death rates of cardiogenic shock complicating acute myocardial infarction: the Second National Registry of Myocardial Infarction. *Am Heart J* 2001;141:65-71.
101. Majumdar SR, Inui TS, Gurwitz JH, Gillman MW, McLaughlin TJ, Soumerai SB. Influence of physician specialty on adoption and relinquishment of calcium channel blockers, and other treatments for myocardial infarction. *J Gen Intern Med* 2001;16:351-359.
102. Yood R, Harrold L, Fish L, Cernieux J, Emani S, Conboy B, Gurwitz J. Prevention of glucocorticoid-induced osteoporosis: Experience in a managed care setting. *Arch Intern Med* 2001;161:1322-1327.
103. Angeja BG, Rundle AC, Gurwitz JH, Gore JM, Barron JV. Death or non-fatal stroke in patients with acute myocardial infarction treated with tissue plasminogen activator. *Am J Cardio* 2001;87:627-630.
104. Field TS, Gurwitz JH, Avorn J, McCormick D, Jain S, Eckler M, Benser M, Bates DW. Risk factors for adverse drug events among nursing home residents. *Arch Intern Med* 2001;161:1629-1634.
105. McCormick D, Gurwitz JH, Goldberg RJ, Becker R, Tate JP, Elwell A, Radford MJ. Prevalence and quality of warfarin use for patients with atrial fibrillation in the long-term care setting. *Arch Intern Med* 2001;161:2458-2463.

106. Baldor RA, Field TS, Gurwitz JH. Using the "Question of Scruples" game to teach managed care ethics to medical students. *Acad Med* 2001;76:510-511.
107. Gurwitz JH, Guadagnoli E, Landrum MB, Silliman RA, Wolf R, Weeks JC. The treating physician as active gatekeeper in the recruitment of research subjects. *Med Care* 2001;39:1339-1344.
108. Putnam KG, Buist DSM, Fishman P, Andrade SE, Boles M, Chase GA, Goodman MJ, Gurwitz JH, Platt R, Raebel MA, Chan KA. Chronic disease score as a predictor of subsequent hospitalization. *Epidemiology* 2002;12:340-346.
109. Silliman RA, Guadagnoli E, Rakowski W, Landrum MB, Lash TL, Wolf R, Fink A, Ganz PA, Gurwitz J, Borbas C, Mor V. Adjuvant tamoxifen prescription in women 65 years and older with primary breast cancer. *J Clin Oncol* 2002;20:2680-2688.
110. Andrade SE, Gurwitz JH. Drug benefit plans under managed care: to what extent do older subscribers selecting less drug coverage put themselves at increased financial risk? *J Am Geriatr Soc* 2002;50:178-181.
111. Gurwitz JH, Goldberg RJ, Malmgren JA, Barron HV, Tiefenbrunn AJ, Frederick PD, Gore JM. Hospital transfer of patients with acute myocardial infarction: the effects of age, race and insurance type. *Am J Med* 2002;112:528-534.
112. Andrade SE, Gurwitz JH, Chan KA, Donahue JG, Beck A, Boles M, Buist DSM, Goodman M, LaCroix AZ, Levin TR, Platt R. Validation of diagnoses of peptic ulcers and bleeding from administrative databases: a multi-health maintenance organization study. *J Clin Epi* 2002;55:310-313.
113. Harrold LR, Yood RA, Straus W, Andrade SE, Reed JI, Cernieux J, Lewis B, Gurwitz JH. The challenges of estimating health service utilization for osteoarthritis patients on a population-level. *J Rheum* 2002;29:1931-1936.
114. Donahue JG, Chan KA, Andrade SE, Beck A, Boles M, Buist DSM, Carey VJ, Chandler JM, Chase GA, Ettinger B, Fishman P, Goodman M, Guess HA, Gurwitz JH, LaCroix AZ, Levin TR, Platt R. Gastric and duodenal safety of alendronate. *Arch Intern Med* 2002;162:936-942.
115. Soumerai SB, McLaughlin TJ, Ross-Degnan D, Christiansen CL, Gurwitz JH. Effectiveness of thrombolytic therapy for acute myocardial infarction in the elderly. *Arch Intern Med* 2002;162:561-568.

116. Mazor KM, Campbell EG, Field T, Purwono V, Peterson D, Lockwood JH, Weissman JS, Gurwitz JH. Managed care education: what medical students are telling us. *Acad Med* 2002;77:1128-1133.
117. Rochon PA, Bero LA, Bay AM, Gold JL, Dergal JM, Binns MA, Streiner DL, Gurwitz JH. Comparing review articles published in peer-reviewed and throwaway journals. *JAMA* 2002;287:2853-2856.
118. Keough M, Field TS, Gurwitz JH. A model of community-based interdisciplinary team training in the care of the frail elderly. *Acad Med* 2002;77:936.
119. Mazor KM, Clauser BE, Field T, Yood R, Gurwitz JH. A demonstration of the impact of response bias on the results of patient satisfaction surveys. *Health Services Research* 2002;37:1403-1417.
120. Chan KA, Truman A, Gurwitz JH, Hurley JS, Martinson B, Platt R, Everhart J, Moseley R, Terrault N, Ackerson L, Selby JV. A cohort study of the incidence of acute liver failure in diabetic patients treated with hypoglycemic agents. *Arch Intern Med* (in press).

Reviews and/or Book Chapters:

1. Gurwitz JH, Soumerai SB, Avorn J. Improving medication prescribing and utilization in the nursing home. *J Am Geriatr Soc* 1990; 38:542-552.
2. Gurwitz JH, Avorn J. Adverse drug reactions: Old Age -- Is it a risk factor? *Agents and Actions Supplements* 1990; 29:13-25.
3. Avorn J, Gurwitz JH. Principles of Geriatric Pharmacology. In: *Geriatric Medicine, Second Edition*. Cassel CK, Riesenber DE, Sorensen LB, Walsh JR, eds.; Springer-Verlag, New York, 1990, pages 65-77.
4. Gurwitz JH, Goldberg RJ, Gore JM. Coronary thrombolysis for the elderly? *JAMA* 1991; 265:1720-1723.
5. Gurwitz JH, Avorn J. The ambiguous relation between aging and adverse drug reactions. *Ann Intern Med* 1991; 114:956-966.
6. Ray WA, Gurwitz J, Decker MD, Kennedy DL. Effects of prescribed medications on the safety of older drivers. *Human Factors* 1992; 34:33-47.
7. Gurwitz JH. The FDA guideline for the study of drugs in the elderly. The perspective of the investigator and clinician. In: *Inclusion of Elderly in Clinical Trials: Cardiovascular Disease and Cardiovascular Therapy as a*

- Model. Wenger, NK, ed.; Marion Merrell Dow Inc., Kansas City, 1993:205-212.
8. Monane M, Gurwitz JH, Monane S, Avorn J. Compliance issues in medical practice. *Hospital Physician* 1993; 29:35-39.
  9. Kalish S, Gurwitz JH, Avorn J. Anticoagulant therapy in the elderly. *Primary Cardiology* 1993; 7:34-42.
  10. Monane M, Gurwitz JH, Avorn J. Pharmacotherapy in with psychoactive medications in long-term care: challenges, management and future directions. *Generations* 1993; 17:57-60.
  11. Harari D, Gurwitz JH, Minaker KL. Constipation in the elderly. *J Am Geriatr Soc* 1993; 41:1130-1140.
  12. Jansen RWMM, Gurwitz JH. Controversies surrounding the use of beta-blocker therapy in elderly patients with cardiovascular disease. *Drugs and Aging* 1994; 4:175-183.
  13. Gurwitz JH, Avorn J. Improving pharmacotherapeutic decision-making in the care of older patients. In: *Developing expertise in geriatric drug therapy*. Abrams, WB (ed.); Merck Company Foundation., Whitehouse Station, 1993:19-26.
  14. Monane M, Gurwitz JH, Avorn J. Pharmacotherapy in with psychoactive medications in long-term care: challenges, management and future directions. In: *Mental health and aging*. Smyer, MA, ed.; Springer Publishing Co., Inc., New York, 1993.
  15. Gurwitz JH. Suboptimal medication use in the elderly: Just the tip of the iceberg. *JAMA* 1994; 272:316-317.
  16. Rochon PA, Gurwitz JH. Geriatrics septet: drug therapy. *Lancet* 1995; 346:32-36.
  17. Gurwitz JH. Unconventional medicine and Alzheimer's disease. *J Am Geriatr Soc* 1995; 43: 829-830.
  18. Avorn J, Gurwitz JH. Drug use in the nursing home. *Ann Intern Med* 1995; 123:195-204.
  19. Monette J, Gurwitz JH, Avorn J. Epidemiology of adverse drug events in the nursing home setting. *Drugs and Aging* 1995; 7:203-211.

20. Avorn J, Gurwitz JH, Drug use. In: Medical Care of the Nursing Home Resident: What Physicians Need to Know. Besdine RW, Rubenstein LZ, Snyder L, eds., American College of Physicians, Philadelphia, 1996: 77-90.
21. Gurwitz JH. Using pharmacoepidemiological findings to guide clinical practice: sulfonylureas and hypoglycemia in older adults. *J Am Geriatr Soc* 1996; 44:871-872.
22. Avorn J, Gurwitz JH. Principles of Geriatric Pharmacology. In: Geriatric Medicine, Third Edition. Cassel, Cohen, Larson, Meier, Resnick, Rubenstein, Sorensen, eds.; Springer-Verlag, New York 1997;66-77.
23. Gurwitz JH, Monane M, Monane S, Avorn J. Polypharmacy. In: Quality Care for the Nursing Home Resident. Lipsitz LA, Morris JN, Murphy K, Belleville-Taylor P. eds.; Mosby Lifeline, St. Louis, 1997: 13-25.
24. Gurwitz JH, Rochon P, Avorn J. Optimal drug therapy in the elderly. *Federal Practitioner* 1996;13: 15-32.
25. Rochon PA, Gurwitz JH. Geriatric update 1996: The age of women. *Lancet* 1996; 348 (suppl II): 8.
26. Solomon DH, Gurwitz JH. Toxicity of nonsteroidal anti-inflammatory drugs in the elderly: Is advanced age a risk factor? *Am J Med* 1997;102:208-215.
27. Gurwitz JH, Goldberg RJ. Coronary thrombolysis for the elderly: Is clinical practice really lagging behind evidence of benefit? *JAMA* 1997;277:1723-1724.
28. Andrade S, Gurwitz JH. Pharmacoepidemiology and the elderly. In: Crome P. Ford G, eds.; Imperial College Press (in press)
29. Gurwitz JH, Rochon P, Avorn J. Optimizing drug therapy in the elderly. *P & T* 1997;22:331-347. (reprinted from *Federal Practitioner* 1996;13:15-32)
30. Rochon PA, Gurwitz JH. Optimizing drug treatment for elderly people: The prescribing cascade. *BMJ* 1997;315:1096-1099.
31. McCormick D, Goldberg R, Gurwitz JH. Anticoagulation in the elderly. *J Thrombosis and Thombolysis* 1999;7:157-163.
32. Goldberg RJ, Gurwitz JH. Disseminating the results of clinical trials to community-based practitioners: Is anyone listening? *Am Heart J* 1999;137:4-7.

33. Vestal RE, Gurwitz JH. Drugs in special populations: the elderly. In: Melmon and Morrelli's Clinical Pharmacology: Basic Principles in Therapeutics, Fourth Edition. Melmon KL, Morrelli HF, Hoffman BB, Nierenberg DW, eds: McGraw-Hill, Inc., New York. 2000
34. Rochon PA, Clark JP, Gurwitz JH. Challenges of prescribing low-dose drug therapy for older people. *CMAJ* 1999;160:1029-31.
35. Rochon PA, Gurwitz JH. Prescribing for seniors: neither too much nor too little. *JAMA* 1999;282:113-115.
36. Barron HV, Rundle A, Gurwitz J, Tiefenbrunn A. Reperfusion therapy for acute myocardial infarction: Observations from the National Registry of Myocardial Infarction 2 (NRM I 2). *Cardiology in Review* 1999;7:156-160.
37. Harrold LH, Field TS, Gurwitz JH. Knowledge, patterns of care and outcomes of care for generalists and specialists. *J Gen Intern Med* 1999;14:499-511.
38. Gurwitz JH, Rochon PA. Health care quality, the elderly patient, and the primary care physician. *J Am Geriatr Soc* 1999;47:1473-1474.
39. Gurwitz JH, Rochon PA. Medication use in the elderly. In: Levkoff SE, Chee YK, (eds) *Aging in good health: Multidisciplinary Perspectives*, Springer, New York 2000.
40. Gurwitz JH. Considerations in designing an ideal medication-use system: lessons from caring for the elderly. *Am J Health-Syst Pharm* 2000;57:548-551.
41. Andrade S, Gurwitz J, Pharmacoepidemiology and the elderly. In: Crome P, Ford G. *Drugs and the older population*. Imperial College Press, London 2000.
42. Platt R, Barrett PH, Durham ML, Gurwitz J, Kilkenny R, Wagner E,. HMO-academic health center partnerships. In: *For the Health of the Public: Ensuring the Future of Clinical Research*. Meyer RE, ed. Association of American Medical Colleges, Washington, DC, 2000.
43. Platt R, Davis R, Finkelstein J, Go AS, Gurwitz JH, Roblin D, Soumerai S, Ross-Degnan D, Andrade S, Goodman MJ, Martinson B, Raebel MA, Smith D, Ulcickas-Yood M, Chan A. Multicenter Epidemiologic and Health Services Research on Therapeutics in the HMO Research Network Center for Education and Research on Therapeutics (CERT). *Pharmacoepidemiol Drug Saf* 2001;10:373-377.
44. Rochon PA, Bronskill SE, Gurwitz JH. Health care for older people. *British Medical Journal* 2002;324:1231-1232.

45. Rochon PA, Gurwitz JH. Medication use. In: Hazzard WR, Blass JP, Halter JB, Ouslander JG, Tinetti ME, eds. *Principles of Geriatric Medicine and Gerontology*, 5<sup>th</sup> edition. McGraw-Hill, New York, NY (in press).
46. Gurwitz JH, Rochon PA. Improving the quality of medication use in the elderly: a not so simple prescription. *Arch Intern Med* (in press).
47. Avorn J, Gurwitz JH, Rochon PA. Principles of Geriatric Pharmacology. In: *Geriatric Medicine, Fourth Edition*. Cassel, Cohen, Larson, Meier, Resnick, Rubenstein, Sorensen, eds; Springer-Verlong, New York (in press).

#### Educationally Relevant Publications:

1. Gurwitz J, Kelly R. A broken heart. Pharmacology Block Case Study New Pathway Curriculum, Harvard Medical School, 1992.
2. Gurwitz JH, Monane M, Avorn J. Principles of Pharmacology. In: *Geriatrics Review Syllabus Supplement* Reuben DB, Yoshikawa TT, Besdine RW, eds. American Geriatrics Society; New York, 1993.
3. Gurwitz JH, Monane M, Avorn J. Polypharmacy. In: *Geriatrics Review Syllabus (1993-1994)* Reuben DB, Yoshikawa TT, Besdine RW, eds. American Geriatrics Society; New York, 1993.
4. Gurwitz JH, Wolfe MM. H<sub>2</sub> blockers: too much of a good thing? Brigham and Women's Hospital Medication Education and Management Program.

#### Non-Print Materials:

1. Gurwitz JH. Drug use in the elderly. (CD-ROM) In: Michael K. Rees, Core Curriculum in Primary Care- Preventive Medicine Section. Silver Platter Education, Inc. Multimedia Accelerated Learning. Norwood, MA 1995.

#### Commentaries, Letters, Book Reviews:

1. Gurwitz JH. Book review: Timiras PS. *Physiological Basis of Geriatrics*. New York, Macmillan, 1988. *N Engl J Med* 1989; 320:471.
2. Gurwitz JH. Commentary to: Greenblatt DJ, Harmatz JS, Shapiro L, et al. Sensitivity to triazolam in the elderly. *NEJM* 1991; 324:1691-8. *ACP Journal Club (A supplement to Annals of Internal Medicine)* 1991; 115(Suppl 6):94.



3. Gurwitz JH. Commentary to: Lipton HL, Bero LA, Bird JA, McPhee SJ. The impact of clinical pharmacists' consultations on physicians' geriatric drug prescribing. A randomized controlled trial. *Med Care* 1992; 30:646-58. ACP Journal Club (A supplement to *Annals of Internal Medicine*) 1993; 118(Suppl 1):29.
4. Gurwitz JH, Avorn J, Ansell J. Aging and warfarin therapy. *Ann Intern Med* 1992; 117:879.
5. Monane M, Gurwitz JH, Avorn J. New books on medication use and the elderly. *The Gerontologist* 1994; 34:272-274.
6. Avorn J, Monane M, Gurwitz JH, Glynn RI, Choodnovskiiy I, Lipsitz LA. Reduction of bacteriuria and pyuria using cranberry juice. *JAMA* 1994; 272:589.
7. Monane M, Bohn RL, Gurwitz JH, Glynn RJ, Avorn J. Heart failure and noncompliance in the elderly. *Arch Intern Med* 1994; 154:2109-2110.
8. Ross-Degnan D, Soumerai SB, Fortess EE, Gurwitz JH. Withdrawal of a drug from the market: what should the prescriber do? *JAMA* 1994; 272:1253.
9. Rochon PA, Gurwitz JH, Chalmers TC. Too many words? Mozart 1, Emperor 0. *JAMA* 1995; 273:1088.
10. Gurwitz JH. Start low and go slow: dosing of antipsychotic medications in elderly patients with dementia. *Arch Intern Med* 1995; 155:2017-2018.
11. Avorn J, Gurwitz JH. Drug use in the nursing home. *Ann Intern Med* 1996; 124:616.
12. Gurwitz JH. Expert commentary on the ACC/AHA Guidelines for the Management of Patients with Acute Myocardial Infarction. *Abstracts of Clinical Care Guidelines (A Joint Commission Newsletter)* 1997;9:7-8.
13. Gurwitz JH. Warfarin therapy in the nursing home. *Arch Intern Med* 1997;157:2665.
14. Gurwitz JH. Thrombolytic therapy for elderly patients. *JAMA* 1997;278:1402.
15. Gurwitz JH. Warfarin treatment. *J Am Geriatr Soc* 1998;46:927-928.
16. Gurwitz JH. Commentary to: Borbone F, McMahon AD, Davey PG, et al. Associations between road-traffic accidents with benzodiazepine use. *Lancet* 1998;352:1331-6. ACP Journal Club (March/April 1999);48.

17. Gurwitz JH, Goldberg RJ, Gore JM. Coronary thrombolysis: a double-edged sword? *Ann Intern Med* 1999;131:71.
18. Rochon PA, Gurwitz JH. Prescribing for elderly persons. *JAMA* 2000;283:339-340.

#### Abstracts:

- A1. Avorn J, Everitt DE, Bright RA, Gurwitz J, Chown M. AIDS-related diagnoses and drug use among AZT users in New Jersey Medicaid. *J Clin Res Drug Dev* 1989; 3:203.
- A2. Field TS, Glynn RJ, Gurwitz JH, Manson JE, Taylor JO, Hennekens CH. Independence of Hemoglobin A<sub>1c</sub> and cardiovascular risk factors in an elderly population. *Gerontologist* 1993; 33(Special Issue II):11.
- A3. Harari D, Gurwitz J. Self-reported fecal incontinence and perianal fecal staining in institutionalized elderly. *Gerontologist* 1993; 33(Special Issue II):51.
- A4. Weinberg AD, Pals JK, Gurwitz JH, Minaker KL. Patterns of antibiotic utilization in early febrile illness in long-term care patients. 1994 Annual Meeting of the Gerontological Society of America. *The Gerontologist* 1994; 34(Special Issue II):16.
- A5. Monane M, Bohn RL, Gurwitz JH, Glynn RJ, Mogun H, Avorn J. Predictors of hospital admission for congestive heart failure in the elderly: the paradox of medication compliance. *J Am Geriatr Soc* 1994; 42:SA45.
- A6. Harari D, Sarkarati M, Gurwitz JH, Grande L, Brown S, McGlinchy-Berroth R, Minaker KL. Use of abdominal radiographs to assess fecal retention in patients with spinal cord injury. *J Am Paraplegia Soc* 1994; 17:207.
- A7. Gurwitz JH, Bohn RL, Kalish SC, Monane M, Glynn RJ, Mogun H, Avorn J. Thiazide diuretics and the initiation of anti-gout therapy in the elderly. *Clin Pharmacol Ther* 1995; 57:198.
- A8. Monette J, Gurwitz JH, Rochon PA, Eckler MA, Avorn J. Use of warfarin in the frail elderly with atrial fibrillation. *Clin Pharmacol Ther* 1995; 57:198.
- A9. Monane M, Gurwitz JH, Bohn RL, Glynn RJ, Levin R, Monette J, Avorn J. The impact of thiazides on the initiation of lipid-reducing agents in the elderly. *Clin Pharmacol Ther* 1995; 57:198.

- A10. Harari D, Gurwitz JH, Bohn RL, Avorn J. How do elderly persons define constipation? 1995 Annual Meeting of the Gerontological Society of America.
- A11. Field TS, Gurwitz JH, Glynn RJ, Salive ME, Chrischilles EA, Taylor JO, Hennekens CH. The renal effects of non-steroidal anti-inflammatory agents in the elderly. 1995 Annual Meeting of the Gerontological Society of America.
- A12. Monane M, Bohn RL, Glynn RJ, Gurwitz JH, Avorn J. A population-based study of compliance with antihypertensive therapy: role of age, race, and gender. 1995 Annual Meeting of the International Society for Pharmacoepidemiology.
- A13. Yeomans SM, Gurwitz JH, Glynn RJ, Avorn J. Initiation of drug therapy to treat glaucoma in a large managed care patient population. 1995 Annual Meeting of the American Academy of Ophthalmology.
- A14. Gurwitz JH, Yeomans SM, Lewis B, Glynn RJ, Avorn J. Treatment for glaucoma: adherence by older persons in managed care. 1996 Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics Clin Pharmacol Ther 1996; 59:172.
- A15. Monette J, Gurwitz JH, Rochon P, Glynn RJ, Avorn J. Warfarin in the frail elderly with atrial fibrillation: results of a physician survey. 1996 Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics. Clin Pharmacol Ther 1996; 59:173.
- A16. Gurwitz JH, Monette J, Rochon P, Eckler MA, Avorn J. Atrial fibrillation in the long-term care setting. J Am Geriatr Soc 1996;44:S20.
- A17. Monette J, Gurwitz JH, Rochon P, Avorn J. Physicians' knowledge and attitudes regarding the use of warfarin in frail elderly patients with atrial fibrillation. J Am Geriatr Soc 1996;44:S22.
- A18. Gurwitz JH, McLaughlin TJ, Willison DJ, Guadagnoli E, Hauptman PJ, Gao X, Soumerai SB. Patient age and late hospital arrival in acute myocardial infarction. J Am Geriatr Soc 1996;44:S20.
- A19. Monane M, Bohn RL, Gurwitz JH, Glynn RJ, Levin R, Avorn J. A population-based study of compliance with antihypertensive therapy: role of drug choices and comorbidity. J Am Geriatr Soc 1996;44:S44.
- A20. Gurwitz JH, Gore J, Goldberg RJ, Rubison M, Magnuson D, French W, Rogers W. Age-related risks of hemorrhagic stroke with rTPA treatment in acute myocardial infarction: findings from the National Registry of Myocardial Infarction. Pharmacoepidemiology and Drug Safety 1996; 5 (suppl 1): S52

- A21. Willison D, Soumerai SB, McLaughlin T, Gurwitz J, Gao X, Guadagnoli E, Pearson S, Hauptman P, McLaughlin B. Cardiologist and generalist involvement in the care of acute MI- implications for quality. 1996 Annual Meeting of the Association for Health Services Research.
- A22. Monane M, Bohn RL, Gurwitz JH, Glynn RJ, Mogun H, Avorn J. The impact of thiazides on the initiation of anti-arrhythmic agents in the elderly. *Clin Pharm Ther* 1997;61:174.
- A23. Gurwitz JH, Gore J, Goldberg R, Barron H, Breen T, Hilbe J, French W, Rogers W. Risk factors for intracranial hemorrhage with TPA treatment in acute myocardial infarction. *JGIM* 1997;12 April (supplement): 53.
- A24. McLaughlin TJ, Gurwitz JH, Gao X, Soumerai SB. Delayed thrombolysis in patients with acute myocardial infarction. *JGIM* 1997;12 April (supplement): 76.
- A25. McLaughlin, Gurwitz JH, Guadagnoli E, Hauptman P. A randomized trial of opinion leader education plus performance feedback to improve quality of care for acute MI. *JGIM* 1997;12 April (supplement):80.
- A26. McCormick D, Gurwitz JH, Savageau J, Yarzebski J, Gore JM, Goldberg RJ. Differences in discharge medication regimens for acute myocardial infarction in patients with HMO vs fee-for-service insurance plans. *JGIM* 1997;12 April (supplement):84.
- A27. Baldor RA, Field TS, Casey L, Lasser D, Ehrlich A, Chuman AB, Gurwitz JH. An interclerkship on managed care for third year medical students. Thirty-sixth Annual Conference on Research in Medical Education (RIME).
- A28. Bohn R, Gurwitz J, Yeomans S, Glynn R, Pasquale L, Avorn J. Clinical characteristics of a cohort of patients newly initiated on chronic glaucoma therapy. 13<sup>th</sup> International Conference on Pharmacoepidemiology.
- A29. Goldberg RJ, Gurwitz JH, McCormick D, Yarzebski JL, Savageau J, Gore JM. Impact of advanced age on, and temporal trends in, prognosis following acute myocardial infarction: a community-wide perspective. 70<sup>th</sup> Scientific Session of American Heart Association.
- A30. Lindblad P, Field T, Straus J, Smiley E, Wright M, Gurwitz JH. Primary care and specialists: an evolving relationship - The Fallon University Project. Fourth Annual Meeting of the Generalist Physician Initiative.
- A31. Sloan MA, Pirzada SR, Ornato J, Gurwitz JH, Gore JM, Tiefenbrunn AJ, French WJ, Weaver WD, Rogers WJ. The rate of ischemic stroke following acute

myocardial infarction is decreasing. The National Registry of Myocardial Infarction Experience. 47<sup>th</sup> Annual Scientific Session of the American College of Cardiology.

- A32. Andrade SE, Gurwitz JH, Fish, LS. The effect of an Rx-to-OTC switch on medication prescribing patterns and utilization of physician services: the case of H<sub>2</sub>-receptor antagonists. 1998 American Association of Health Plans/HMO Research Network Conference.
- A33. Field T, Mazor K, Lessard D, Lindblad P, Gurwitz JH. Patient-satisfaction with primary care physicians and rates of referrals to specialists. 1998 American Association of Health Plans/HMO Research Network Conference.
- A34. Gurwitz JH, Field T, Avorn J, McCormick D, Jain S, Eckler M, Benser M, Bates DW. Incidence and preventability of adverse drug events in the nursing home setting. Society of General Internal Medicine, 21<sup>st</sup> Annual Meeting, April 1998.
- A35. McCormick D, Gurwitz JH, Lessard D, Yarzebski J, Gore JM, Goldberg RJ. Use of aspirin, beta blockers and lipid lowering medications prior to recurrent myocardial infarction: missed opportunities for secondary prevention. Society of General Internal Medicine, 21<sup>st</sup> Annual Meeting, April 1998.
- A36. Majumdar SR, Gurwitz JH, Soumerai SB. Undertreatment of hyperlipidemia in the secondary prevention of coronary artery disease. Society of General Internal Medicine, 21<sup>st</sup> Annual Meeting, April 1998.
- A37. Soumerai SB, McLaughlin TJ, Gurwitz JH, Pearson S, Christiansen C, Gao X, Ross-Degnan D. Quality of care for acute MI among elderly patients in medicare HMOs vs. fee-for-service insurance. Society of General Internal Medicine, 21<sup>st</sup> Annual Meeting, April 1998.
- A38. Markson LJ, Weinstein B, Alper E, Gurwitz JH. Effect of a nurse-practitioner-covered medical inpatient service on housestaff clinical experience. Society of General Internal Medicine, 21<sup>st</sup> Annual Meeting, April 1998.
- A39. Gurwitz JH, Andrade SE, Fish LS, Cernieux J, Yood R. Evaluation of a comprehensive formulary switch in the managed care setting: The case of hormone replacement therapy. 1999 American Association of Health Plans/HMO Research Network Conference.
- A40. Harrold L, Gurwitz JH, Field T, Andrade SE, Fish LS, Jarry PD, Yood D. The Diffusion of a novel therapy into general medical practice: the case of sildenafil. 1999 American Association of Health Plans/HMO Research Network Conference.
- A41. Field T, Gurwitz JH, Avorn J, McCormick D, Jain S, Eckler M, Benser M, Edmondson AC, Bates DW. Incidence and preventability of adverse drug events in

the nursing home setting. 1999 American Association of Health Plans/HMO Research Network Conference.

- A42. Yood R, Harrold L, Reed J, Andrade S, Cernieux J, Lewis B, Straus W, Weeks M, Gurwitz JH. Validation of osteoarthritis diagnoses in an administrative database. 1999 American Association of Health Plans/HMO Research Network Conference.
- A43. Gurwitz JH, Guadagnoli E, Silliman R, Weeks JC. The treating physician as active gatekeeper in the recruitment of research subjects. Society of General Internal Medicine, 22<sup>nd</sup> Annual Meeting, April 1999.
- A44. Gurwitz JH, Goldberg RJ, Elwell A, Radford MJ. Prevalence and quality of warfarin use for patients with atrial fibrillation in the long-term care setting. Society of General Internal Medicine, 22<sup>nd</sup> Annual Meeting, April 1999.
- A45. Harrold L, Yood R, Reed J, Andrade S, Cernieux J, Lewis B, Straus W, Weeks M, Gurwitz JH. Validation of osteoarthritis diagnoses in an administrative database. Society of General Internal Medicine, 22<sup>nd</sup> Annual Meeting, April 1999.
- A46. Mazor KM, Field TS, Gurwitz JH, Hatem D. Do HMO staff physicians who precept differ from physicians who do not? Society of General Internal Medicine, 22<sup>nd</sup> Annual Meeting, April 1999.
- A47. Mazor KM, Field TS, Gurwitz JH, Yood R. An investigation of the relationship between response rate and patient satisfaction ratings. Society of General Internal Medicine, 22<sup>nd</sup> Annual Meeting, April 1999.
- A48. Donahue J, Andrade S, Beck A, Boles M, Buist D, Chandler J, Chase G, Ettinger B, Goodman M, Guess H, Gurwitz J, Lacroix A, Levin TR, Platt R. Multi-HMO assessment of alendronate and gastro-duodenal perforation, ulcer or bleeding. International Society for Pharmacoeconomics and Outcomes Research 4<sup>th</sup> Annual International Meeting, May 1999.
- A49. Majumdar SR, Inui TS, Gurwitz JH, Gillman MW, McLaughlin TJ, Soumerai SB. Physician specialty and relinquishing calcium channel blockers after acute myocardial infarction. Abstract. J Gen Int Med. 1999; 14 (supplement 2): 108.
- A50. Harrold LR, Gurwitz JH, Field TS, Andrade SE, Fish LS, Jarry PD, Yood R. The diffusion of a novel therapy into general medical practice: the case of sildenafil. Fifteenth International Conference on Pharmacoepidemiology, 1999.
- A51. Andrade SE, Gurwitz JH, Fish LS, Cernieux J, Yood R. Evaluation of a Comprehensive formulary switch in the managed care setting: the case of hormone replacement therapy. Fifteenth International Conference on Pharmacoepidemiology, 1999.

- A52. Field T, Gurwitz J, Avorn J, McCormick D, Jain S, Eckler M, Benser M, Bates DW. Risk factors for adverse drug events among nursing home residents. Fifteenth International Conference on Pharmacoepidemiology, 1999.
- A53. Gurwitz J, Field T, Avorn J, McCormick D, Jain S, Eckler M, Benser M, Bates DW. Incidence and preventability of adverse drug events in the nursing home setting. Fifteenth International Conference on Pharmacoepidemiology, 1999.
- A54. Harrold L, Yood R, Reed J, Andrade S, Cernieux J, Lewis B, Straus W, Weeks M, Gurwitz JH. Validation of osteoarthritis diagnoses in an administrative database. 63<sup>rd</sup> Annual Scientific Meeting of the American College of Rheumatology, 1999.
- A55. Yood R, Harrold L, Fish L, Cernieux J, Emani S, Conboy B, Gurwitz J. The prevalence of patient education and screening for osteoporosis among patients receiving long-term glucocorticoid therapy. 2000 HMO Research Network Conference.
- A56. Field T, Cadoret C, Cernieux J, O'Mara P, Granlund M, Gurwitz J, Silliman R, Prout M, Pransky G, Colton T. Upper body function among breast cancer survivors. 2000 HMO Research Network Conference.
- A57. Field T, Gurwitz J, Avorn J, McCormick D, Jain S, Eckler M, Benser M, Bates DW. Risk factors for adverse drug events among nursing home residents. 2000 HMO Research Network Conference.
- A58. Gurwitz JH, Guadagnoli E, Silliman R, Weeks J. The treating physician as active gatekeeper in the recruitment of research subjects. 2000 HMO Research Network Conference.
- A59. Harrold L, Yood R, Straus W, Andrade S, Reed J, Cernieux J, Lewis B, Weeks M, Gurwitz H. Assessing health care utilization in osteoarthritis: the limitations of identifying a study population solely through administrative data. 2000 HMO Research Network Conference.
- A60. Field T, Harrold L, Cadoret C, Granlund M, Gurwitz J, Yood R, Reed J, Lewis B. Use of alternative/complementary medicine among managed care enrollees with osteoarthritis. 2000 HMO Research Network Conference.
- A61. Gurwitz J, Gore J, Goldberg R, Barron H, Tiefenbrunn A, Frederick P, Malmgren J. Determinants of hospital transfer in the management of acute myocardial infarction. Society of General Internal Medicine, 23<sup>rd</sup> Annual Meeting, May 2000.
- A62. Harrold LR, Yood RA, Straus W, Andrade SE, Reed JI, Cernieux J, Lewis B, Weeks M, Gurwitz JH. Assessing health care utilization in osteoarthritis: the

limitations of using a population identified solely through administrative data. Society of General Internal Medicine, 23<sup>rd</sup> Annual Meeting, May 2000.

- A63. Soumerai SB, McLaughlin TJ, Ross-Degnan D, Gurwitz JH. Inappropriate use of thrombolytics and excess mortality in the elderly. Society of General Internal Medicine, 23<sup>rd</sup> Annual Meeting, May 2000.
- A64. Field TS, Cadoret CA, Cernieux J, O'Mara P, Granlund M, Gurwitz JH, Silliman R, Prout M, Pransky G, Colton T. Upper body function among breast cancer survivors. Society of General Internal Medicine, 23<sup>rd</sup> Annual Meeting, May 2000.
- A65. Goodman MJ, Gurwitz J, Chan KA, Andrade SE, DeFore TA, Graham D, Platt R. Tramadol and initiation of anticonvulsant therapy. Sixteenth International Conference on Pharmacoepidemiology, 2000, Pharmacoepidemiology and Drug Safety 9(suppl 1):S82.
- A66. Chan KA, Donohue JG, Andrade SE, Beck A, Boles M, Buist DSM, Carey VJ, Chandler J, Chase GA, Ettinger B, Fishman P, Goodman M, Guess HA, Gurwitz JH, LaCroix AZ, Levin TR, Platt R. Alendronate, osteoporotic fracture, and gastroduodenal safety. Sixteenth International Conference on Pharmacoepidemiology, 2000, Pharmacoepidemiology and Drug Safety 2000;9(suppl 1):S112.
- A67. Field T, Harrold L, Cadoret C, Granlund M, Gurwitz J, Yood R, Reed J, Lewis B, Straus W. Use of alternative/complementary medicine among managed care enrollees with osteoarthritis. 16<sup>th</sup> International Conference on Epidemiology, 2000, Pharmacoepidemiology and Drug Safety 2000;9(suppl 1):S59.
- A68. Gurwitz JH, Andrade S, Cernieux J. Increasing the financial risk of Medicare beneficiaries for drug costs. 53<sup>rd</sup> Annual Scientific Meeting of the Gerontological Society of America. The Gerontologist 2000;40 (Special Issue I):175.
- A69. Yood RA, Harrold LR, Fish L, Cernieux J, Emani S, Conboy E, Gurwitz J. Prevention of glucocorticoid-induced osteoporosis. Arthritis Rheum 2000;43:5142.
- A70. Andrade SE, Gurwitz JH. Drug benefit plans under managed care: to what extent do elderly subscribers selecting less drug coverage put themselves at increased financial responsibility? Pharmacoepidemiology and Drug Safety 2001;10 (Suppl 1):S39.
- A71. Putnam KG, Chan KA, Fishman PA, Buist DS, Andrade SE, Beck A, Boles M, Goodman MJ, Gurwitz JH, Platt R. Chronic disease score as a predictor of subsequent hospitalization: a multi-HMO study. Pharmacoepidemiology and Drug Safety 2001;10(Suppl 1):S139



- A72. Gurwitz JH, Field T, Harrold L, Rothschild J, Debellis K, Seger A, Cadoret C, Fish L, Garber L, Cernieux J, Bates D. The detection of preventable adverse drug events among ambulatory geriatric patients. 2002 Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics.
- A73. Malek K, Fink A, Thwin SS, Gurwitz J, Silliman R, Ganz P. Oncologists' and surgeons' perceptions of the risk-benefits of tamoxifen prescription in older breast cancer patients. 2002 Annual Meeting of the American Society of Clinical Oncology.
- A74. Field T, Bir A, Cernieux J, Yood R, Gurwitz JH. Capitated Primary Care Physician Compensation: Impact on Care for Enrollees with Diabetes and Hypertension. 2002 HMO Research Network Annual Meeting.
- A75. Gurwitz JH, Field T, Harrold L, Rothschild J, Debellis K, Seger A, Cadoret C, Fish L, Garber L, Cernieux J, Bates D. The Detection of Preventable Adverse Drug Events Among Ambulatory Geriatric Patients. 2002 HMO Research Network Annual Meeting.
- A76. Harrold L, Yood RA, Bourne L, Walker N, Gurwitz JH. Identifying Patients Interested in a Group Medical Visit Program for the Treatment of Arthritis. 2002 HMO Research Network Annual Meeting.